

**STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION
BUREAU OF RAIL AND TRANSIT**

DURHAM, DOVER, NEWINGTON, AND PORTSMOUTH BICYCLE TRANSPORTATION FIELD REVIEW

DATE OF FIELD REVIEW: June 3, 2015

LOCATION OF REVIEW: Durham, Dover Point, Newington, Greenland and Portsmouth



PARTICIPANTS:

Keith Cota, NHDOT Highway Design, Chief Project Manager
Steve Pesci, University of New Hampshire, Campus Planning – Facilities
Juliet Walker, City of Portsmouth, Transportation Planner
Rick Taintor, City of Portsmouth Planning Director
Tom Morgan, Town Planner, Town of Newington
Liz Durfee, Regional Planner, Strafford Regional Planning Commission
Scott Bogle, Senior Planner, Rockingham Regional Planning Commission
Ann Rugg, Manager, CommuteSMARTseacoast, Coop. Alliance for Seacoast Transportation
Jennifer Murphy, Lonza Biologics Process Development Scientist, Barrington commuter
Aaron Hubbell, Lonza Biologics Manager, Training and Development, Durham commuter
Diane Gibbons, Papa Wheelies Inventory logistics and Human Resources
Jon Mullen, Sig Sauer, Senior Manufacturing Engineer and Nottingham Commuter
Bill Fisk, Granite State Wheelmen Safety and Education & experienced bicycle commuter
Tim Blagden, Bike Walk Alliance of New Hampshire, Executive Director
Brian Fruh, PaxWorld, VP of Information Technology and Dover commuter
Bill Kennedy, Granite State Wheelmen and commuter from Dover
Brian Schutt, NHDOT, Maintenance District 6 Principal Engineer
Gerry Bedard, NHDOT, Engineer, Preliminary Design
Larry Keniston, NHDOT, Intermodal Facilities Engineer, 603-271-2468 Lkeniston@dot.state.nh.us

SUBJECT: Bicycle Transportation Field Review - Durham, Dover, Newington, and Portsmouth

Notes on Review: On June 3, 2015, stakeholders met at the Memorial Union Building on the University of NH Campus. Participants field reviewed the following sites:

Main Street, Durham looking west.



Steve Pesci discusses the shared use lane that Durham repurposed from a former bicycle lane following October, 2014 bicycle dooring crash and fatality

Comments:

Travel way tapered pavement marking layout at Young Drive intersection



NH 108 Looking west at Young Drive shoulder taper

Comments:

Steve Pesci: The practice sacrifices the shoulder and encourages turning motor vehicles to use the otherwise protected bike/pedestrian space to accelerate and decelerate.



Looking west. Old Piscataqua Road terminates prior to reaching US 4.

Comments:

Review US 4 Bunker Creek Bridge



Looking west at US 4 bridge over Bunker Creek. Jennifer Murphy turns around as Keith Cota points out the highway from the east

Comments:



Bunker Creek Guard rail terminal at easterly end of Westbound traffic guard rail run uses a design similar to picture above

Comments:

Jon Mullen: Can the terminal end unit design be more forgiving for a bicyclist who is run off the road into this terminal by speeding traffic?



NHDOT Chief Project Manager Keith Cota discusses Spaulding Turnpike project

Comments:

Keith Cota and Tom Morgan briefed participants about ongoing negotiations between DOT and the Town of Newington to reserve part of the Spaulding's present southbound barrel for bicyclists when the turnpike's motor vehicle traffic is relocated easterly. This new bicycle infrastructure would run from Mitchell's gas station to the new entrance to Pease. The proposed route would not be as scenic as the present one that goes by the Newington Fire Station, but it would be much shorter for commuters traveling between Dover and Pease/Portsmouth than any other route should the Little Bay Bridge require closure due to structural issues.



Newington Police and review participants discuss [RSA 265:144](#) along Fox Point Road near the Newington Police Headquarters

Comments:

Liz Durfee: Throughout the Pease Tradeport, way-finding signs are needed to navigate cyclists through the Pease Development roads and paths to Portsmouth. Tom Morgan explained that the Town continues to work toward establishing additional way-finding signs in Newington.



Comments:

Jon Mullen: New Spaulding interchange and roundabout will connect Arboretum Drive to a large increase in traffic volumes. Meanwhile, the shoulder just south of the roundabout is too narrow for the increased motor traffic and bicycle traffic to travel simultaneously in the same cross section along Arboretum Drive.

Tom Morgan explained that the Town of Newington proposed retaining a stretch of the old Arboretum Drive to serve as a bypass for bicyclists and pedestrians so as to allow them to avoid the roundabout. The Pease Development Authority (PDA), however, did not support the proposal.

Picture Left: Typical sunken grate along Arboretum Drive



Picture Right: Arboretum Drive at Newington Street/Nashua Avenue intersection



Picture Left: RSA [265:144](#) provides over a dozen specific reasons why bicyclists may choose to operate two or more abreast or may not be riding to the right, including passing, preparing for a left turn and avoiding hazards like this sunken drainage grate along Arboretum Drive.

Picture Right: shows back of STOP sign on Newington Street leg of intersection

Comments:

Jon Mullen: Newington Street motorists too often disregard the stop sign approaching the Arboretum Drive/Nashua Avenue/New Hampshire Avenue intersection, making it hazardous for bicyclists along Arboretum Drive and New Hampshire Avenue

Tom Morgan noted that there are several dozen such sunken catch basins in the Tradeport area. The catch basin grates should be elevated to pavement level. The hazard is compounded by the vertical granite curbs, which effectively prevent a surprised bicyclist from avoiding the catch basin without steering left and potentially into traffic. Tom Morgan suggested the elimination of the curbs at some locations so as to alleviate the hazard. While the PDA has not been receptive to the suggestion of removing any curbing, Tom noted that curb removal would have the added benefit of reducing the volume of contaminated storm water that flows into the estuary.



Along International Drive, participants demonstrate how bicyclists can ease employers of the burden of providing “free” parking for employees.

Comments:

New Pease Path at driveway to Grill 28/Golf course and C&J bus station across Grafton Road C&J Bus terminal, covered bicycle parking across Grafton Avenue



Juliet Walker leads participants along Grafton Avenue



Covered bicycle parking accommodation at the C&J Terminal

The AASHTO Bicycle Facilities Guide notes that “attempts to require bicyclists to yield or stop at each cross-street or driveway are inappropriate and typically not effective.”

Comments:

Hampton Branch Crossing at Ocean Boulevard



Juliet Walker, Rick Taintor and Scott Bogle discuss potential NHDOT purchase and City use of Hampton Branch RR from Pan Am

Comments:

US 1 at Elwyn Drive intersection



Concerns expressed about sunken drainage grates along the easterly curblane of US 1 initially motivated this stop. Juliet Walker and Rick Taintor discussed the City's vision for US 1 from here north toward Downtown.

Comments:

Looking south along Lafayette Road at Andrew Jarvis Drive



The City of Portsmouth recently made improvements and transformation of the US 1 area between Andrew Jarvis Drive and Byp. 1

Comments:

Looking south along State Street across from PaxWorld on Penhallow Street



Here along State Street, parking is at a premium Brian Fruh and Juliet Walker explain that cyclists commuting in milder seasons free up parking spaces when traffic and parking demand from all sources is highest.

Comments:



NHDOT Chief Project Manager Keith Cota discusses with participants the recent Memorial Bridge Construction project

Comments:

Looking south along Daniel Street (US 1 South) at Penhallow Street crossing



Liz Durfee uses repurposed space to accommodate bicycle parking. It would take both sides of an entire city block in order to park this many automobiles.

Comments:

Looking North Maplewood Avenue and Vaughn Street



Juliet Walker discusses a vision for Maplewood Avenue in the area near the railroad tracks

Comments:

Looking North, Woodbury Avenue at Market Street intersection



This outer left turn lane is less than 14 feet wide, participants, therefore, bicycle two or more abreast, which maximizes the safety, efficiency and capacity of the intersection. This situation is one of over a dozen “exceptions specifically cited in RSA [265:144](#) why a cyclist may not be “riding to the right.”

Comments:

Looking South along Boston Harbor Road toward the Little Bay Bridge



Keith Cota discusses Newington Dover project features on the Dover side of the Little Bay Bridge

Comments:

Liz Durfee noted that west bound bicyclists emerging off of the Little Bay Bridge and heading toward Dover via Hilton Park can not conveniently operate bicycles off the sidewalk because of the vertical curb that holds up the adjacent sidepath. Keith explained that while he appreciates the problem, this portion of the project is complete and remediation is not anticipated. Bicyclists can proceed west along the sidepath and turn east at the westerly limit of the curbed sidepath.

Looking east along US 4 at Back Bay Road, Dover



Signal detection equipment often does not detect bicycles at approaches to signalized intersections. Because of the volume of participating bicyclists on this occasion, however, the Boston Harbor Road approach seemed to detect and respond to cyclists. The Back Bay approach to US 4 includes a post-mounted button in the island that can be used by bicyclists in lieu of detection.

Comments:

Bill Kennedy, Brian Fruh, Jon Mullen and Bill Fisk on return to UNH, Durham



General Comments